

AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1.-43. (Canceled)

44. (Currently Amended) A method for transmitting between a wireless communication device and a plurality of wireless communication stations, the method comprising:

dividing a frequency bandwidth of a downlink channel into a plurality of uplink frequency sub-channels;

allocating an uplink sub-channel from said plurality of uplink frequency sub-channels to each station from the plurality of stations based on received signal strength of the stations;

transmitting a multicast transmission to the plurality of stations over said downlink substantially the entire frequency bandwidth of the channel; and

receiving an acknowledgement signals from a station from the plurality of stations over said plurality of allocated frequency uplink sub-channel sub-channels allocated thereto.

45. (Previously Presented) The method of Claim 44, further comprising:

retransmitting said multicast transmission if an acknowledgment of said transmission is not received from all of the plurality of stations.

46. (Currently Amended) The method of Claim 44, further comprising:

assigning a group to at least one of the plurality of stations; and

transmitting said group assignment to said at least one of said plurality of stations, wherein said transmitting of said multicast transmission is to all stations assigned to said group.

47. (Previously Presented) The method of Claim 46, wherein said assignment is based on a received signal strength of said at least one of the plurality of stations.

48. (Previously Presented) The method of Claim 46, wherein said assignment is based on a dynamic range of a receiver of said at least one of the plurality of stations.

49. (Currently Amended) The method of Claim 44 46, wherein said transmitting of said multicast transmission is to all stations assigned to said group wherein the allocating includes allocating to a station a sub-channel of the plurality of sub-channels based on a signal strength of a received acknowledgement signal from the station.

50. (Currently Amended) A processor-readable storage medium having stored thereon instructions that, if executed by a processor, cause the processor to perform a method comprising:

dividing a frequency bandwidth of a downlink channel into a plurality of uplink frequency sub-channels;

allocating an uplink sub-channel from said plurality of uplink frequency sub-channels to each station from the plurality of stations based on received signal strength of the stations;

transmitting a multicast transmission to the plurality of stations over said downlink substantially the entire frequency bandwidth of the channel; and

receiving an acknowledgement signals from a station from the plurality of stations over said plurality of allocated frequency uplink sub-channel sub-channels allocated thereto.

51. (Previously Presented) The processor-readable storage medium of Claim 50, wherein the method further comprises:

retransmitting said multicast transmission if an acknowledgment of said multicast transmission is not received from all of said plurality of stations.

52. (Currently Amended) The processor-readable storage medium of Claim 50, wherein the method further comprises:

assigning a group to at least one of said plurality of stations; and
transmitting said group assignment to said at least one of said plurality of stations,
wherein said transmitting of said multicast transmission is to all stations assigned to
said group.

53. (Currently Amended) A wireless device, comprising:

a channel divider ~~for dividing to divide~~ a frequency bandwidth of a downlink channel into a plurality of uplink frequency sub-channels;

an allocator ~~for allocating to allocate an uplink sub-channel from~~ said plurality of uplink frequency sub-channels to each station ~~from a~~ the plurality of stations based on received signal strength of the stations;

a transmitter ~~for transmitting to transmit~~ a multicast transmission to said plurality of stations over ~~said downlink~~ substantially the entire frequency bandwidth of the channel; and

a receiver ~~for receiving to receive an acknowledgement signals from a station from~~ said plurality of stations over said uplink plurality of allocated frequency sub-channels allocated thereto.

54. (Currently Amended) The wireless device of Claim 53, wherein said transmitter is ~~for retransmitting to retransmit~~ said multicast transmission if an acknowledgment of said multicast transmission is not received from all of said plurality of stations.

55. (Previously Presented) The wireless device of Claim 53, further comprising:

a controller for assigning a group to at least one of said plurality of stations, and
wherein said transmitter is for transmitting said group assignment to said at least one of said plurality of stations.

56. (Currently Amended) A processor for a wireless device, the processor comprising:

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a channel divider for dividing to divide a frequency bandwidth of a downlink channel into a plurality of uplink frequency sub-channels;

an allocator for allocating to allocate an uplink sub-channel from said plurality of uplink frequency sub-channels to each station from a the plurality of stations based on received signal strength of the stations; and

a controller to control for a transmitter for transmitting a multicast transmission to said plurality of stations over said downlink substantially the entire frequency bandwidth of the channel and for, and to control a receiver for receiving an acknowledgement signals from a station from said plurality of stations over said uplink plurality of allocated frequency sub-channels allocated thereto.

57. (Previously Presented) The processor of Claim 56, wherein said controller controls said transmitter for retransmitting said multicast transmission if an acknowledgment of said multicast transmission is not received from all of said plurality of stations.

58. (Currently Amended) The processor of Claim 56, further comprising:
wherein said controller for assigning is to assign a group to at least one of said plurality of stations, and wherein said controller controls to control said transmitter for transmitting said group assignment to said at least one of said plurality of stations.

59. (Currently Amended) A wireless device, comprising:
a channel divider for dividing to divide a frequency bandwidth of a downlink channel into a plurality of uplink frequency sub-channels;
an allocator for allocating to allocate an uplink sub-channel from said plurality of uplink frequency sub-channels to each station from a the plurality of stations based on received signal strength of the stations;
a transmitter for transmitting to transmit a multicast transmission to said plurality of stations over said downlink substantially the entire frequency bandwidth of the channel;

a receiver for receiving to receive an acknowledgement signals from a station from said plurality of stations over said uplink plurality of allocated frequency sub-channels allocated thereto; and

a dipole antenna operably connected to said transmitter and said receiver.

60. (Currently Amended) The wireless device of Claim 59, wherein said transmitter is for retransmitting to retransmit said multicast transmission if an acknowledgment of said multicast transmission is not received from all of said plurality of stations.

61. (Currently Amended) The wireless device of Claim 59, further comprising:
a controller for assigning to assign a group to at least one of said plurality of stations, and wherein said transmitter is for transmitting to transmit said group assignment to said at least one of said plurality of stations.

62. (Currently Amended) A method for transmitting between a wireless communication station and a wireless communication device, the method comprising:

receiving at the station an allocation of an uplink a frequency sub-channel of a plurality of frequency sub-channels within a frequency bandwidth of a channel, wherein said frequency sub-channel is allocated to the station based on a received signal strength of the station from a plurality of uplink sub-channels, wherein said plurality of uplink sub-channels are a frequency bandwidth division of a downlink channel;

receiving a multicast transmission from the wireless device over said downlink substantially the entire frequency bandwidth of the channel; and

transmitting from the station to the wireless communication device an acknowledgment signal over said uplink the frequency sub-channel allocated to the station.

63. (Currently Amended) The method of Claim 62, further comprising:

transmitting a group membership request to the wireless communication device to request requesting membership in a group comprising at least one station; and
transmitting said group membership request to the wireless device.

64. (Currently Amended) A processor-readable storage medium having stored thereon instructions that, if executed by a processor, cause the processor to perform a method comprising:

~~receiving at a station an allocation of an uplink a frequency sub-channel of a plurality of frequency sub-channels within a frequency bandwidth of a channel, wherein said frequency sub-channel is allocated to the station based on a received signal strength of the station from a plurality of uplink sub-channels, wherein said plurality of uplink sub-channels are a frequency bandwidth division of a downlink channel;~~

~~receiving a multicast transmission from a wireless device over said downlink substantially the entire frequency bandwidth of the channel; and~~

~~transmitting to the wireless device an acknowledgment signal over said allocated uplink frequency sub-channel.~~

65. (Currently Amended) The processor-readable storage medium of Claim 64, wherein the method further comprises:

~~transmitting a group membership request to the wireless communication device to request requesting membership in a group comprising at least one station; and~~
~~transmitting said group membership request to the wireless device.~~

66. (Currently Amended) A wireless communication station, comprising:

~~a controller for receiving to receive an allocation of an uplink a frequency sub-channel from a plurality of frequency sub-channels within a frequency bandwidth of a channel, wherein said frequency sub-channel is allocated to the station based on a received signal strength of the station from a plurality of uplink sub-channels, wherein said plurality of uplink sub-channels are a frequency bandwidth division of a downlink channel;~~

~~a receiver for receiving to receive a multicast transmission from a wireless device over said downlink substantially the entire frequency bandwidth of the channel; and~~

~~a transmitter for transmitting to transmit to the wireless device an acknowledgment over said allocated frequency uplink sub-channel allocated to the station.~~

67. (Previously Presented) The station of Claim 66, further comprising:

a requestor for requesting membership in a group comprising at least one station, wherein said transmitter is for transmitting said group membership request to said wireless device.

68. (Currently Amended) A processor, comprising:

a controller to receive for receiving an allocation of an uplink a frequency sub-channel to a wireless communication station from a plurality of frequency sub-channels within a frequency bandwidth of a channel, wherein said frequency sub-channel is allocated to the station based on a received signal strength of the station, from a plurality of uplink sub-channels, wherein said plurality of uplink sub-channels are a frequency bandwidth division of a downlink channel; and to control said control for a receiver for receiving a multicast transmission from a wireless device over said downlink substantially the entire frequency bandwidth of the channel, and for to control a transmitter for transmitting to the wireless device an acknowledgment signal over said allocated uplink frequency sub-channel.

69. (Previously Presented) The processor of Claim 68, further comprising:

a requestor for requesting membership in a group comprising at least one station, wherein said controller controls said transmitter for transmitting said group membership request to said wireless device.

70. (Currently Amended) A station, comprising:

a controller to receive for receiving an allocation of an uplink a frequency sub-channel from a plurality of frequency sub-channels within a frequency bandwidth of a channel, wherein said frequency sub-channel is allocated to the station based on a received signal strength of the station from a plurality of uplink sub-channels, wherein said plurality of uplink sub-channels are a frequency bandwidth division of a downlink channel;

a receiver for receiving to receive a multicast transmission from a wireless device over said downlink substantially the entire frequency bandwidth of the channel station;

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a transmitter for transmitting to transmit to the wireless device an acknowledgment signal over said allocated frequency uplink sub-channel allocated to the station; and
a dipole antenna operably connected to said transmitter and said receiver.

71. (Previously Presented) The station of Claim 70, further comprising:

a requestor for requesting membership in a group comprising at least one station, wherein said transmitter is for transmitting said group membership request to said wireless device.

72. (Currently Amended) A method for transmitting and receiving between a wireless communication device and a plurality of wireless communication stations, the method comprising:

dividing a the frequency bandwidth of a downlink channel into a plurality of uplink frequency sub-channels by the wireless device;

allocating an uplink sub-channel from said plurality of uplink frequency sub-channels to each station from the plurality of stations by the wireless device based on received signal strength of the stations;

transmitting a multicast transmission from the wireless device to the plurality of stations over substantially an entire frequency bandwidth of said downlink channel by the wireless device;

receiving said multicast transmission from the wireless device over said downlink channel by at least one station of the stations;

receiving said allocation by the at least one station of the stations;

transmitting an acknowledgement from the at least one station to the wireless device an acknowledgment over said uplink the frequency sub-channel allocated to said at least one of the stations station which received said multicast transmission by said at least one of the stations; and

receiving said acknowledgement from said at least one of the stations which received said multicast transmission over said uplink sub-channel allocated thereto by the wireless device.

73. (Previously Presented) The method of Claim 72, further comprising:

retransmitting said multicast transmission by the wireless device if an acknowledgment of said multicast transmission is not received from all of the plurality of stations.

74. (Previously Presented) The method of Claim 72, further comprising:

assigning a group to at least one of the plurality of stations by the wireless device; and
transmitting said group assignment to said at least one of said plurality of stations by the wireless device.

75. (Previously Presented) The method of Claim 74, wherein said assignment is based on a received signal strength of said at least one of the plurality of stations.

76. (Previously Presented) The method of Claim 74, wherein said assignment is based on a dynamic range of a receiver of said at least one of the plurality of stations.

77. (Currently Amended) The method of Claim 74-72, wherein said transmitting of said
multicast transmission by the wireless device is to all stations assigned to said group
the allocating includes allocating to a station a sub-channel of the plurality of sub-channels
based on a signal strength of a received acknowledgement signal from the station.

78. (Currently Amended) A wireless communication system, comprising:

a wireless communication device and a plurality of wireless communication stations,
wherein said wireless communication device comprises:

a channel divider ~~for dividing to divide~~ a frequency bandwidth of a ~~downlink~~ channel
into a plurality of uplink frequency sub-channels;

an allocator ~~for allocating to allocate~~ an uplink sub-channel from said plurality of
uplink frequency sub-channels to ~~each station from~~ said plurality of stations based on
received signal strength of the stations;

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a transmitter for transmitting to transmit a multicast transmission to said plurality of stations over substantially an entire frequency bandwidth of the channel; and

a receiver for receiving to receive an acknowledgement signals from a station from said plurality of stations over said uplink plurality of allocated frequency sub-channels allocated thereto.

wherein at least one station of said plurality of stations, comprises:

a controller for receiving to receive said allocation of said uplink frequency sub-channels;

a receiver for receiving to receive said multicast transmission from said wireless device over the frequency bandwidth of said downlink channel; and

a transmitter for transmitting to transmit to said wireless device said acknowledgment over said uplink the sub-channel allocated to the at least one station of said plurality of stations.

79. (Previously Presented) The wireless communication system of Claim 78, wherein said transmitter of said wireless device is for retransmitting said multicast transmission if an acknowledgment of said multicast transmission is not received from all of said plurality of stations.

80. (Currently Amended) The wireless communication system of Claim 78, wherein said wireless device further comprises an assignor for assigning a group to at least one of said plurality of stations, and wherein said transmitter of said wireless device is for transmitting said group assignment to said at least one of said plurality of stations.

81. (Currently Amended) The wireless communication system of Claim 78, wherein said at least one station of said plurality of station further comprises a requestor for requesting membership in a group comprising at least one station; and wherein said transmitter of said station is for transmitting said group membership request to said wireless device.